

In the Claims

Claim 1 (Original): An apparatus for measuring transfer of components across a tissue, comprising: a support plate; an array of samples supported by the support plate; a tissue specimen overlaying the array of samples; and a reservoir plate secured to a side of the tissue specimen opposite the array of samples, the reservoir plate having an array of reservoirs.

Claim 2 (Original): The apparatus of claim 1, wherein each sample of the array of samples comprises a component-in-common and at least one additional component, wherein each sample differs from at least one other sample with respect to at least one of: (i) the identity of the additional components, (ii) the ratio of the component-in-common to the additional component, or (iii) the physical state of the component-in-common.

Claim 3 (Original): The apparatus of claim 2, wherein the component-in-common is a pharmaceutical, a dietary supplement, a nutraceutical, or an alternative medicine.

Claim 4 (Original): The apparatus of claim 2, wherein the additional component is an adhesive, an enhancer, an additive, a solvent, an excipient, or a combination thereof.

Claim 5 (Original): The apparatus of claim 4, wherein the enhancer is a chemical enhancer, a lipid permeation enhancer, a solubility enhancer, or a combination of enhancers.

Claim 6 (Original): The apparatus of claim 4, wherein the adhesive is a polyisobutylene, a silicone, or an acrylic adhesive.

Claim 7 (Original): The apparatus of claim 1, wherein each sample in the array of samples is a solid source sample or a liquid source sample.

Claim 8 (Original): The apparatus of claim 1, wherein the tissue specimen comprises skin tissue.

Claim 9 (Original): The apparatus of claim 8, wherein the skin tissue comprises epidermis or stratum corneum.

Claim 10 (Original): The apparatus of claims 8 or 9, wherein the skin tissue is human skin tissue, animal skin tissue or engineered skin tissue.

Claim 11 (Original): The apparatus of claim 1, wherein the tissue specimen is divided into a plurality of segments, wherein each segment covers a sample and is sealed between the support plate and an annular portion of the reservoir plate defining a reservoir for each sample.

Claim 12 (Original): The apparatus of claim 11, wherein the tissue specimen is divided into a plurality of segments by mechanical cutting, scribing, laser cutting, scoring or crimping.

Claim 13 (Original): The apparatus of claim 1, wherein each reservoir comprises a passage extending through the reservoir plate and is aligned over a sample.

Claim 14 (Original): The apparatus of claim 13, further comprising a reservoir medium within at least one of the reservoirs.

Claim 15 (Original): The apparatus of claim 14, wherein the reservoir medium is a fluid or a solution.

Claims 16-49 (Canceled).

Claim 50 (New): The apparatus of claim 1, wherein each of said reservoirs in said array of reservoirs has openings on opposing surfaces of said reservoir plate.

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